

PATENT COOPERATION TREATY

REC'D 18 MAY 2005

WIPO

PCT

From the:
INTERNATIONAL SEARCHING AUTHORITY

To:

Alban Tay Mahtani & De Silva
39 Robinson Road
#07-01 Robinson Point
Singapore 068911

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

12 MAY 2005

Applicant's or agent's file reference
2050030KC

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/SG2005/000061

International filing date (day/month/year)
1 March 2005

Priority date (day/month/year)
15 March 2004

International Patent Classification (IPC) or both national classification and IPC
Int. Cl. 7 H01L 33/00

Applicant

TINGGI TECHNOLOGIES PRIVATE LIMITED et al

1. This opinion contains indications relating to the following items:

| | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input checked="" type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the IPEA/AU
**AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaaustralia.gov.au
Facsimile No. (02) 6285 3929**

Authorized Officer

S. T. PRING

Telephone No. (02) 6283 2210

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

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Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
 a sequence listing
 table(s) related to the sequence listing
 - b. format of material
 in written format
 in computer readable form
 - c. time of filing/furnishing
 contained in the international application as filed.
 filed together with the international application in computer readable form.
 furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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|---|--|-----|--|-------------|--------------------|-----|--------|--|--|---------------------|--------------------|-----|--------|--|--|-------------------------------|--------------------|-----|--------|--|--|
| Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | | | | | | | | | | | | | | | | | | | |
| <p>1. Statement</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 5px;">Novelty (N)</td> <td style="width: 40%; padding: 5px;">Claims 1-53</td> <td style="width: 10%; padding: 5px;">YES</td> </tr> <tr> <td colspan="3" style="padding: 5px;">Claims</td> </tr> <tr> <td style="padding: 5px;">Inventive step (IS)</td> <td style="padding: 5px;">Claims 1-53</td> <td style="padding: 5px;">YES</td> </tr> <tr> <td colspan="3" style="padding: 5px;">Claims</td> </tr> <tr> <td style="padding: 5px;">Industrial applicability (IA)</td> <td style="padding: 5px;">Claims 1-53</td> <td style="padding: 5px;">YES</td> </tr> <tr> <td colspan="3" style="padding: 5px;">Claims</td> </tr> </table> <p>2. Citations and explanations:</p> <p><u>Novelty and Inventive Step</u></p> <p>The disclosed art describes the removal of the substrate but this is replaced by another. They disclose reflecting layer but on the textured surface of the substrate which is contained in the middle of the device, not the bottom or without the substrate. Therefore the removal of the substrate and the patterning of the epitaxial layers thus revealed with an reflecting ohmic layer on the top surface of the epitaxial layers can be said to be novel and to have an inventive step.</p> | | | | Novelty (N) | Claims 1-53 | YES | Claims | | | Inventive step (IS) | Claims 1-53 | YES | Claims | | | Industrial applicability (IA) | Claims 1-53 | YES | Claims | | |
| Novelty (N) | Claims 1-53 | YES | | | | | | | | | | | | | | | | | | | |
| Claims | | | | | | | | | | | | | | | | | | | | | |
| Inventive step (IS) | Claims 1-53 | YES | | | | | | | | | | | | | | | | | | | |
| Claims | | | | | | | | | | | | | | | | | | | | | |
| Industrial applicability (IA) | Claims 1-53 | YES | | | | | | | | | | | | | | | | | | | |
| Claims | | | | | | | | | | | | | | | | | | | | | |

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 51 and 52 are not clear as to grouping of semiconductor devices from which they are selected.